REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-54 are presently active in this case. No claims have been added, amended or canceled.

The outstanding Office Action rejected Claims 1-54 under 35 U.S.C. § 102(e) as anticipated by Fujita et al. (U.S. Patent No. 6,542,705, herein referred as "Fujita"). As discussed more fully below, Applicant respectfully traverses the rejection and requests reconsideration of the rejection.

Initially, Applicant respectfully requests that the references cited in the Information Disclosure Statement filed April 1, 2004 be acknowledged as having been considered in the next Office Action. A copy of the PTO-1449 form and a copy of the original filing receipt are submitted herewith.

Generally summarizing, Applicant's invention, as recited in Claim 1, relates to an image forming apparatus including a heater, a detector configured to detect a current supplied from an external power source to the image forming apparatus, a battery, a charger and a controller configured to control the charger such that the current supplied from the charger to the battery changes based on the current detected by the detector. As explained in Applicant's specification at page 2, line 29 to page 3, line 21 with corresponding Fig. 5, Applicant's invention improves upon conventional image forming apparatuses because is capable of efficiently charging a battery that is supplying energy to a heater.

Turning now to the applied reference, the Fujita patent discloses a potential detector 24,[1] a current detector 37 and the CPU 13.[2] However, Fujita does not teach or suggest

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[1] See Fujita, for example in Fig. 49.

Applicant's claimed "detector configured to detect a current supplied from an external power source to the image forming apparatus," nor Applicant's claimed "controller configured to control the charger such that a current supplied from the charger to the battery changes based on the current detected by the detector."

Fujita teaches that first the potential detector 24 detects *a voltage between opposite ends of the capacitor 18*.[3] Therefore the potential detector 24 of Fujita is not disclosed as detecting the current supplied from an external power source to the image forming apparatus, according to Applicant's Claim 1. However, the outstanding Office Action states that Fujita discloses a detector to detect a current supplied from an external power source 3 (i.e. main power source).[4] Applicant respectfully disagrees. Fujita merely discloses that at the time of warm-up, the capacitor or charger 18 drives the miniature heater 22 with a DC current and thereby heats the thermostat 23 to a temperature below the upper limit.[5] Fujita is silent about a detector configured to detect a current *supplied from an external power source* to the image forming apparatus. Fujita teaches that the current detector 37 detects *a current being discharged from the capacitor 18*.[6] Therefore, the current detector 37 does not detect the current supplied from an external power source to the image forming apparatus, as recited in Applicant's Claim 1.

In addition, in Fujita the CPU 13 determines the internal resistance of the capacitor 18 on the basis of the voltage and current detected by the potential detector 24 and current detector 37 detecting a current being discharged from the capacitor, respectively.[7] Subsequently, with Fujita the CPU 13 *determines that the life of the capacitor 18* has ended when the internal resistance becomes two times as high as the initial internal resistance of the

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[2] See Fujita, for example in Fig. 55.
[3] See Fujita, for example at column 25, lines 20-21.
[4] See outstanding Office Action, at page 2, lines 16-17.
[5] See Fujita, for example at column 24, lines 13-15.
[6] See Fujita, for example at column 28, lines 38-39.
[7] See Fujita, for example at column 28, lines 41-44.

capacitor 18.[8] Accordingly, in Fujita the CPU 13 does not control the charger such that a

current supplied from the charger to the battery changes based on the current detected by the

detector, as recited in Applicant's Claim 1.

Since independent Claims 14-16, 19, 32-34, 37 and 50-52 disclose similar detector

and controller features (Claims 14-16), a step of detecting and a step of controlling (Claims

19 and 32-34) and means for detecting and means for controlling (Claims 37 and 50-52), the

rejection of Claims 1-16, 19-34 and 37-52 is believed to be overcome and Applicant

respectfully traverses the rejection based on Fujita and requests reconsideration of this

rejection.

In response to the rejection of Claims 17-18, 35-36 and 53-54 under 35 U.S.C. §

102(e), Applicant respectfully traverses the rejection and requests reconsideration of the

rejection. Fujita discloses the presence of different switches 7[9] and 15,[10] a switching circuit

24[11] and a power source circuit 27.[12] However, Fujita does not disclose "a controller

configured to control the charging switch such that the charger connects to the battery during

an image forming period," as recited in Applicant's Claim 17. The outstanding Office Action

states that Fujita discloses that a "controller controls the charging switch such that the charger

is connected to the battery during an image forming period."[13] Again, Applicant respectfully

disagrees that Fujita discloses such a feature. As disclosed in Fujita, the switch 7 connects

the charger 6 to the auxiliary power source 4 during a stand-by state.[14] The controller 8 in

Fujita therefore connects the switch 7 to the charger 6 *when the heater 2 is held at stable*

temperature while consuming a minimum of power.[15] Further, *in the stand-by state of the*

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[8] See Fujita, for example at column 28, lines 44-46.
[9] See Fujita, for example in Fig. 1.
[10] See Fujita, for example in Fig. 15.
[11] See Fujita, for example in Fig. 27.
[12] See Fujita, for example in Fig. 28.
[13] See outstanding Office Action, at page 3, lines 4-5.
[14] See Fujita, for example at column 6, lines 23-24.
[15] See Fujita, for example at column 6, lines 51-54.

fixing device, the CPU 13 connects the storage 17 to the charger 18 via the switch 15[16] and

the charger 18 chargers the double-layer capacitor 17b via the switch 15.[17] The CPU 13

causes a switching circuit 24 to select a first mode *at another time than the time of warm-up*

or select a second mode at the time of warm-up. In the first mode, the CPU 13 causes the

charge/discharge switching means to connect the commercial power source 16 to a storage

25.[18] *In a stand-by state*, the CPU 13 causes the switch 15 to connect the capacitor or storage

18 to the charger 19[19] and causes the switch 15 to connect the storage battery 21 to the

charger 19.[20] Accordingly, Fujita does not disclose "a controller configured to control the

charging switch such that the charger connects to the battery *during an image forming*

period," since all actions performed by the CPU in relation with the switches 7 and 15,

switching circuit 24, or the power source circuit 27 are *performed in the stand-by state*.

Accordingly, Fujita does not teach a controller configured to control the charging switch such

that the charger connects to the battery during an image forming period, as recited in

Applicant's independent Claim 17. Therefore, Applicant respectfully traverses and requests

reconsideration of the rejection of Claim 17 based on Fujita.

Additionally, independent Claim 35 teaches a step of controlling the connecting and

disconnecting step such that the charger connects to the battery during an image forming

period, independent Claim 53 teaches a similar feature in means-plus-function language, and

Claim 18 is dependent upon Claim 17. Accordingly, the rejection of Claims 18, 35-36 and

53-54 is believed to be overcome, and Applicant respectfully traverses the rejection based on

Fujita and requests reconsideration of the rejection of Claims 17-18, 35-36 and 53-54.

Consequently, in view of the present request for reconsideration, no further issues are

believed to be outstanding in the present application, and the present application is believed

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[16] See Fujita, for example at column 11, lines 5-7.
[17] See Fujita, for example at column 13, lines 35-36.
[18] See Fujita, for example at column 16, lines 29-33.
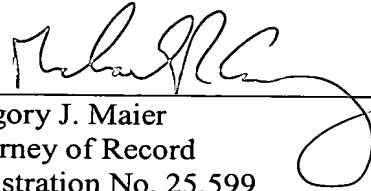[19] See Fujita, for example at column 21, lines 59-59.
[20] See Fujita, for example at column 23, lines 40-41.

to be in condition for formal Allowance. A Notice of Allowance for Claims 1-54 is earnestly

solicited.

Should the Examiner deem that any further action is necessary to place this

application in even better form for allowance, the Examiner is encouraged to contact

Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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